

An interpretative phenomenological analysis of performance influencing factors within the practice environment

STEVEN M. SMITH¹, STEWART T. COTTERILL², HAZEL BROWN³

^{1,2,3}Department of Sport, Exercise and Health, University of Winchester, UNITED KINGDOM

Published online: June 30, 2020

(Accepted for publication: June 22, 2020)

DOI:10.7752/jpes.2020.04224

Abstract:

An individual's perception of their competitive environment can shape their psychological experience and influence their performance. Influences from competitive performance environments have received considerably more research attention than the performance influences that might occur from practice environments. This fact is curious as athletes tend to spend far more time practising than competing. The aim of this study was to undertake a rich exploration of the psychological influencing factors experienced by basketball players in the practice environment using an idiographic approach to provide a deeper understanding of participant experience. Participants were five male English basketball players (mean age = 18 years) competing in the Elite Academy Basketball League and enrolled in full-time education. Data were collected through semi-structured interviews and data were analysed using Interpretative Phenomenological Analysis. Nine superordinate themes were constructed from data analysis, which included: player perceptions of the coach, relationships between teammates, emotional and behavioural perception, negative experiences leading to enhanced motivation, performance expectations before and during practice activities, philosophy towards the success of the team, current physical state, goal focus within the practice environment, and responsibility positions during practice activities. The results from this study suggest that psychological factors influencing performance may differ between practice and competition environments. The reported factors that appear to be specific to the practice environment, which have received little representation within previous competition-based research include: negative experiences leading to positive performance outcomes, intra-team competition and goal orientations, and performance expectations. Practitioners and researchers may wish to consider the practice environment independently from competitive performance environments. Several applied implications are also offered.

Key Words: basketball, student-athlete, elite, affect

Introduction

Athletes tend to spend most of their time developing and preparing in the practice environment, which has been suggested to be a crucial factor in determining competitive performance outcomes (Durand-Bush & Salmela, 2002). Indeed, a direct relationship between deliberate practice, skill attainment, and performance has been highlighted across a number of studies (e.g., Baker, Horton, Robertson-Wilson, & Wall, 2003; Mujika et al., 1995). Practice is, therefore, an essential component of an athlete's sporting experience where skill development and preparation for competition take place (Macnamara, Moreau, & Hambrick, 2016). Previous research has explored a number of the structural components of practice, which include player activity levels (e.g., Baker et al., 2003), coach behaviours (e.g., Cushion, Ford, & Williams, 2012), and the strategic use of skills and techniques (e.g., Hardy, Roberts, Thomas, & Murphy, 2010), but research has only recently started to reveal the psychological influencing factors within the practice environment (Smith, Cotterill, & Brown, 2019).

Despite limited research attention towards the psychological influences of the practice environment, Wagstaff (2019) reported deliberate practice activities to be influential within sport organisational psychology. In a UK Sport commissioned project, Douglas and Carless (2006) reported the need for practitioners to focus on environmental factors outside of direct competition as they play an important role in athlete performance. The need to focus on the psychological environment of practice has also been reported in motivational climate research by Smith, Quested, Appleton, and Duda (2016) when they acknowledged different climates existing between practice and competition environments. Therefore, the need to explicitly explore the psychological influencing factors experienced in the practice environment seems to be a requirement if one wishes to better understand athlete development and performance.

The study of the entire performance environment, which includes elements of practice, provides a wide evaluation of influencing factors but has predominantly focused on perceptions within short-term competitive

scenarios. For example, Pain and Harwood (2007, 2008) identified psychological influencing factors generated in international youth soccer tournaments with a focus on competition performance. Pain, Harwood, and Mullen (2012) followed with a season-long evaluation of a UK university soccer team but only reported on influences based on competitive experiences. Fletcher and Streeter (2016) did include practice within their analysis but it was positioned within a holistic exploration of the entire performance environment. The emphasis applied to influences experienced during short-term competitive moments fails to recognise those influences generated from the practice environment that are longer in duration and highly repetitive in nature.

Smith et al. (2019) conducted a case study within a basketball practice environment that included perceptual data from various role-related positions involved within the functioning of the team (e.g., players, coaches, support staff, academic staff, and programme leaders). Results revealed a complex interaction of influencing factors that included application of effort, individuality of experience, ability and social status, practice preparation, team drive, and practice vision. To the best of our knowledge this study was the first to specifically pay attention to, and identify, the factors of influence in the practice environment. Smith et al. (2019) also suggested the psychological environments of competition and practice to be different, and a need to apply a greater depth of research scrutiny to the practice environment in the future.

To generate data and develop our understanding of the practice environment, an idiographic approach was employed in the current study to generate a depth and richness of participant experience (Picione, 2015). Compared to the previous practice environment research (Smith et al., 2019), the current study isolated the perceptions of players as they are the primary agents of experience within the environment. Similar to the bulk of previous performance environment research, the current study collected influence through a stimulus-based perspective, which focused on the transactional relationship between individual and environment that produces either benefit or harm towards performance (Arnold & Fletcher, 2012). It is predicted that current study findings may overlap previous competition research in several areas but also offer unique and novel results specific to the practice environment. Therefore, the aim of this study was to undertake a rich exploration of the psychological influencing factors experienced by basketball players in the practice environment that influence performance.

Methods

Design

The current study was underpinned by ontological relativism and epistemological constructivism because it was assumed that multiple and subjective realities existed where participant knowledge is subjective and constructive (Sparkes & Smith, 2014). The current study adopted an interpretative phenomenological analysis (IPA) approach. IPA is a qualitative research approach that attempts to explore and make sense of an individual's life experiences (Smith & Osborn, 2003). Drawing fundamentally from principles of phenomenology, hermeneutics, and idiography, IPA promotes the identification of an individual's unique experiences without comparing to predetermined criteria (Smith, Flowers, & Larkin, 2013). Despite previous attempts in sport that returned superficial results from participants answering fixed diary questions, an emphasis upon frequency counts, and an inability for the researcher to probe participants further with questioning (e.g., Nicholls, 2007), IPA can provide a much needed idiographic approach to the study of complex social performance environments (Allen-Collinson, 2009; Callary, Rathwell, & Young, 2015).

The first named author who conducted the interviews and data analysis has a background in playing and coaching sport at a national level and has spent several years working with Elite Academy Basketball League (EABL) players. This fact is important as researcher interpretations of the data form a critical part of the research process by acting as a conduit between participant and reader (Smith et al., 2013). This study adopted specific protocol guidelines set out by Smith et al. (2013) in the conducting of an IPA study.

Participants

The participants in this study were five male basketball players enrolled fulltime at a UK college that held Advanced Apprenticeship in Sporting Excellence (AASE) status for basketball competing in the EABL. A participant sample of five was deemed appropriate to generate a rich and compelling case that was not subject to the potential problems from data overload (Noon, 2018). The EABL is a national competition for student-athletes aged 16-19 years where participants' ability resides between the Swann, Moran, and Piggott (2015) classification of semi-elite and competitive-elite. The age range of participants was 17-19 years ($M = 18$, $SD = 0.7$) and basketball practice experience ranged between 4-8 years ($M = 6$, $SD = 1.6$). Participants were recruited from three academy teams and were interviewed during a single EABL season. The participants were purposefully sampled from a homogenous group of EABL players who were in their third year of the programme to provide a good degree of participant experience.

It was important for the lead researcher to develop a good rapport with the participants; facilitating participants to answer more freely and honestly to generate richer data (Pietkiewicz & Smith, 2014). IPA researchers acknowledge potential subjectivity within interviews, which is an inevitable part of an interpretation process that uses phenomenological and hermeneutic framing (Eatough & Smith, 2017). To guard against leading participants to give responses that would please the interviewer, minimal guidance was given during interviews and participants were encouraged to expand upon experiences. Participants were also sent a copy of

their transcript and asked to read it to ensure their experiences were accurately recorded. Pseudonyms were assigned to participants to protect their identity, which were John, Paul, George, Richard, and Peter.

Procedure

Basketball England and EABL coaches were contacted and permission was granted for players to be approached following the scrutinizing of ethical procedures for participant safety. Participant contact information was supplied by each participants' coach following an initial invitation by the coach to take part in the study. Participants were contacted by the lead researcher to participate in the study via telephone call and were offered an interview date that suited their schedule. During this initial conversation the purpose of the study was explained and an information sheet was emailed to the participant to read and reflect on. Participants were advised that their confidential involvement was voluntary and their anonymity was assured. Any reference made to an individual who could be identified was excluded from the study. Before the interviews took place, all participants were given the opportunity to ask questions about the study, its purpose, and the consent they were giving. When the participants were satisfied with their role in the study they gave their signed consent. Ethical approval was obtained from the authors' University ethics committee.

Data Collection

The participants individually took part in interviews away from the basketball environment. All interviews were audio recorded and lasted between 67 and 121 minutes ($M = 91.6$, $SD = 23.1$). Data were collected using a semi-structured interview approach to guide the discussion rather than dictate it, which allowed for individuality and flexibility throughout the process (Eatough & Smith 2017). The interview schedule contained questions designed to draw out participant experience when in the practice environment. The questions were not designed around a specific framework or criteria because it would restrict gathering previously unidentified factors (Sparkes & Smith, 2009). A strict criteria-based interview schedule would be unable to provide the "openness-to-the-world of, and faithfulness to participant-generated concepts and accounts held to be essential for phenomenological research" (Allen-Collinson, 2009, p. 21).

Questions and prompts were designed to elicit the positive and negative performance influences that existed within the practice environment and were influenced by the first named author's experience of the environment under investigation (Callary et al., 2015; Pietkiewicz & Smith, 2014). At the start of each interview the participant was made aware that all questioning was specific to practice environment experience rather than competition. Example questions included: "Can you describe what influenced you?" and "Can you describe the influence your teammates had on you?".

Questioning was kept to a minimum and did not rigidly follow the schedule, which encouraged participants to tell their story in their own words throughout the discussion (Smith et al., 2013). If a topic of interest was elicited during the interview, the interviewer probed the participant with additional questioning to enable the participant's exploration of specific details and influencing factors (Smith et al., 2013). Example questions included: "What do you think the cause was?" and "Why do you think it affected you so much?". The audio recording was transcribed verbatim within 24 hours of the interview and a copy sent to the participant. Participants were offered the chance to amend or change statements but none did. During transcription all text was anonymized to protect identities and stored in accordance with the Data Protection Act 1998.

Data Analysis

Interview transcriptions were read and reread to ensure understanding of the narrative and an immersion into the world of the participant. During this phase semantic content and language was examined on an exploratory level with the audio recording being replayed. Areas of interest were noted in the left hand column of the transcript that had a clear and credible phenomenological focus by staying as close as possible to the participant's explicit meaning towards the practice environment (Tracy, 2010). Thought was given to the context from which each statement derived and more abstract concepts were interpreted to aid in the sense making of the participant's experience (Smith et al., 2013). Following initial comment making, the transcript was reread for a final time and previous notes were used to create tentative single data emergent themes that were written in the right hand column. The construction of themes was a collaboration between participant and researcher to foreground the voice of the participant and address the aims of the study (Didymus, 2017). An example of the participant-researcher collaboration is shown in the results, which are presented with direct participant quotes that are interweaved with researcher interpretations.

An example of the analysis process that provided depth, experience, and meaning to the data (Tracy, 2010) can be seen with participant George who stated: "I don't know why but I woke up groggy and not feeling good. My muscles were aching and at practice nothing was going in and I was getting frustrated". Initial text analysis identified a negative performance influence and further probing revealed the participant had entered a negative spiral with no ability to control performance, had experienced fatigue of unknown origin, held a focus on tangible outcomes, had an inability to readjust performance expectations, and lacked an understanding of why performance had declined. All of these potential factors of influence were taken forward to encompass different data themes.

During data analysis the previous interview was analysed before the next took place, which allowed complete devotion towards each interview. Previous interviews informed future analysis and this permitted for an exhaustion of themes both at a preliminary (interview) and later (theme construction) analysis stage (Saunders

et al., 2018). Following each interview analysis the preceding total analysis was reviewed against the current analysis to interpret shared experiences and develop associated themes to complete the hermeneutic cycle; the need for phenomenological inquiry to be an iterative process that moves back and forth through participants' accounts to understand their experiences (Gill, 2015).

Emergent theme data units were added to a computerized spreadsheet that allowed data units to be moved quickly and easily, and previous analysis, theme generation, and ideas to be bracketed separately. The manual mapping of interrelationships, connections, and patterns created related theme clusters by moving data units into loosely related clusters that evolved as further data units were added. At this stage, the researcher took a more central role in data interpretation (Smith et al., 2013). Finally, following the completion of all interviews, superordinate themes were created from the clusters of subordinate themes.

Rigor and Quality

The use of universal criteria for qualitative research has been questioned by Smith and McGannon (2017) and this is especially noteworthy for IPA research that is highly idiographic and interpretative. However, where possible, aspects of quality that could be drawn from Tracy's (2010) eight "big-tent" criteria for excellent qualitative research were applied as long as they did not affect the theoretical underpinnings of IPA. For example, in an attempt to increase meaningful coherence a hierarchical content tree of superordinate themes, subordinate themes, and additional data extracts provides the reader with a meaningful way to interpret the data. The practice environment is an understudied performance environment domain and was deemed to be a worthy topic for investigation. This study's findings are presented with direct participant quotes and each superordinate subsection within the results section contains quotes from over half of the participants in the study to add richness and sincerity to analysis. Despite its limitations as a method for enhancing rigor (see Smith & McGannon, 2017) member checking was performed to enhance credibility by sending participants their transcriptions and asking them to confirm the accuracy. Finally, all participants' individual data items were included and accounted for within superordinate theme categorisation, which provided a true representation of experience.

Results

A total of nine superordinate themes were constructed from 24 subordinate theme categories, which are displayed in Table 1. These nine superordinate themes included: player perceptions of the coach, relationships between teammates, emotional and behavioural perception, negative experiences leading to enhanced motivation, performance expectations before and during practice activities, philosophy towards the success of the team, current physical state, goal focus within the practice environment, and responsibility positions during practice activities. Richer detail of the superordinate themes is provided below with extracts from interviews. Additional quotes are provided in Table 1 to offer the reader further insight into the participants' voice in the generation of the results.

Player Perceptions of the Coach

Coach moods were cited as contagious by Peter: "If the coach is in a good mood it leads to players being positive" and by Paul: "I'm always aware of when coach is in a bad mood". Peter perceived coaches in a negative mood to have a detrimental effect on player performance: "If everyone is working hard and trying to compete and you make a bad pass, it's not that bad. But if the coach is in a bad mood and you make one bad pass they will punish us for it". However, Richard describes below how valence is fluid and dependant on situational appraisal:

If the coach is in a bad mood then you're more likely to run, it's not fun at all. But a lot of the time I try to pick it up in the sense of "come on guys, it's all fine" and making it clear that we still need to get a good practice out of it and work hard.

A positive coach-player relationship was centred on coaches being perceived as professional, knowledgeable, understanding, and approachable. Positive coach behaviour was highlighted by George as effective for performance: "He ran the play for me and trusted me in that situation. When I scored it was like he expected that and it made me feel better".

Relationships Between Teammates

The amount of socialising the team undertook, the type of communication, and the bonds of friendship within the practice environment were found to be pivotal in influencing teammate cohesion. Richard discussed how open relationships enhanced development:

My friend is happy to tell me if I was doing something wrong. He would just say "you're messing up, fix it". We were both willing to listen to each other and adapt to improve and could settle issues within a few seconds and move on. I knew him for two years and we hung out a lot. We both have the goal of improving and getting somewhere with basketball and we are willing to listen to each other to develop.

The forging of respect within the practice environment involved several elements, as discussed by George in the below extract:

I feel I'm one of the few players on and off the court that everyone likes so no one really has a problem with me. Everyone on the team respects me because I've never really taken basketball that seriously but

I'm still a really good player and I'll turn up and not shy away from a big game. Come a big game I lift my performance. I can catch and rebound for the guards and I'll do the stuff a lot of players won't. Losing to a lesser skilled and lesser respected teammate during intra-team competition was found to produce both positive influences, through anger increasing motivation and self-sacrifice for the team, and negative influences, as shown in this quote from John:

It frustrates the hell out of me. I'll either get really irritated by them or force myself to play better. I'll manage my anger in to a driving force so I will play well against them and prove I am the better player or I get frustrated and play far worse than I did before. When this happens I give the decisions up to other players to run the point and help the team in other ways but most of the time I just get worse and act like a child.

Emotional and Behavioural Perception

Positive emotional and behavioural displays, putting in high levels of effort, and belief in oneself or others, had a positive influence on performance as suggested by John: "If the team is working hard it makes me want to put it [effort] in". Conversely, teammates displaying low confidence, low effort, and negative behaviour were seen by Peter as damaging: "He [best player] constantly had a go at me. I didn't want to play". John indicated the contagious effects of perceived emotions from others: "The trouble with me is that when everyone around me is relaxed I relax and don't perform to my best". The inability to control performance was cited as a negative performance influence: "I personally feel I have no control over it. It's either going to be good or bad. I have zero say and I've always felt like that" (George).

Negative Experiences Leading to Enhanced Motivation

Experiences originally perceived as negative were reported to produce positive performance influences. For example, Paul stated: "I don't like it [negative coach feedback] but I got to look at the positives. If I think back it hurts at the time but I improve after". A negative performance produced a motivational response in Richard: "If someone tells me I'm rubbish, I mean I might be playing badly, but if someone came up to me and said you're playing crap, I would go out to prove them wrong". There appeared to be an ability required to cope with negative situations, something John cited as not possessing:

I've had a lot of bad practices but I don't know what causes them. When I train badly I sulk and try to do too much and it gets worse again. Some of the causes are when players get on my back but other reasons I don't know.

Performance Expectations Before and During Practice Activities

Good current form (e.g., created through recent practice performance) and goal achievement was suggested to produce positive performance influences. Negative influencing factors occurred when participants did not reach their expected performance levels. This was especially problematic when current state was disregarded when setting performance expectations. Peter indicated how a suboptimal physical condition effected his performance: "I wasn't hitting my shots and couldn't run or jump properly due to my injury. Someone, it wasn't on purpose, hit me with a hard foul and tipped me over the edge".

Teammates appeared to have an effect on expectations, particularly when practising with better players, as shown in the following quote from Paul:

They were all much better than me and put me down possession after possession. I wasn't getting what I would get in my age group at that time. The coach talked to me because I was trying to be a perfectionist and that was coming into play too much.

Paradoxically, John suggested that despite his conscious effort to withdraw effort from practice, he still expected to perform well:

I didn't feel motivated. On Tuesday I have two training sessions. In the EABL session first, I give it my all but the under 18s training after, I just think I don't want to be here and want to be home, resting up before the Wednesday game. That normally means I'm putting in less effort and it's annoying because I know I can play better.

Strategies to overcome the negativity created by not performing to expected levels were evident through George's and John's interviews respectively: "Instead of trying to shoot my way out of a bad slump I would try and bring my teammates into it more because I know I'm struggling" and "I try to adapt if I'm tired or not having a good session by breaking things down into individual plays instead of thinking I've got to do this and this by the end".

Philosophy Towards the Success of the Team

This superordinate theme was characterized by the approaches to practice activities. A recurring negative influence was cited by participants who perceived teammates to be driven by personal development goals rather than team goals:

The team's goal was to win everything but currently I think everyone is focused on getting to America. Everyone is trying to do too much and worry about their own stats instead of playing as a team. Last year we played as a team and won the cup. (John)

Conversely, Richard appeared to have a team-first philosophy: "I try to focus on the team now rather than past mistakes. We work together as a team to achieve". However, maintaining a team-first approach with players feeling secure to take risks appeared difficult, as captured by George's interview:

I'm awful in the way I talk to people, it can't help the team. If someone repeatedly makes the same mistake I'll keep my mouth shut the first time, say something the second time and the third time I'll just flip and start shouting at them.

Current Physical State

An association existed between practice environment factors and somatic perceptions, as shown in the below extract from Paul:

We are physically tired towards the end of the week. On Monday and Tuesday we all feel fine as we have just come off the weekend and we rested but by Thursday, after the Wednesday game, our bodies are broken. Trying to develop and at the same time try to rest your body is tough. Physical tiredness brings you down mentally, it starts from your body and then it brings you down. You can't think through your mind when your body is screaming at you.

George stated the benefits of an effective wake-up period and good nutrition, which suggests a level of independence is required to improve physical state away from practice, especially as participants did not receive any nutritional or recovery assistance outside of the practice environment. John identified a benefit to being in good physical condition:

On that day I lift them. I don't have to take extra care of myself because my body is not hurting whereas towards the end of the week I'm thinking that my body is injured or I'm ill so I need to look after myself first.

Evidence supported the existence of an overriding somatic influence on practice performance.

Goal Focus within the Practice Environment

Goal driven practice sessions containing constructive coach feedback were deemed to be positive performance influencers, as intimated by Richard: "He [coach] would say this is what we need to do to get better, this is how we will improve and this is the standard you are going to hold yourself to". Practice sessions providing no constructive feedback or lacking clear planning were viewed as holding a negative impact. The unfair singling out of players was cited by Peter as negatively influencing performance:

I was quite annoyed about it and didn't go back to practice for a week. We were doing a drill and there was one player who kept making jokes about what I was doing. I'm not sure why but my coach flipped out on me and said get your stuff and leave. I was annoyed because I was doing what I was supposed to be doing.

Intra-team competition during practice was predominantly referred to as offering positive performance influences. It was an advantage to set targets against peers:

It gets me ready. He's saying he's better, but in my head I'm going to outdo him. It helps me get into an attacking mind-set to ensure I go at the player and work hard to prove to myself and everyone else I am the better player and he isn't. (Richard)

However, Richard also stated that losing to inferior teammates caused negative outcomes. Pressure and stress felt in the build up to competitive matches was talked about by Paul:

Every minute of the day you need to be doing stuff to be getting you better for the game on Wednesday or the weekend. If you are not doing the right thing now, the pressure is building up on you and you know if you don't do that stuff you are going to be fatigued or confidence and arousal levels are going to drop for the game.

Responsibility Positions During Practice Activities

There existed a perception of having control within the practice environment and being accountable for overall team performance. Positive performance factors were suggested to emanate from feelings of being needed within the team, as commented upon by George: "Having responsibility to gel the team together" and by Paul: "Having leadership responsibilities gives me energy". Alternatively, the majority of negative influencing factors were from not being part of, or not being able to contribute towards, team performance as stated by Peter: "I got injured and couldn't play, that killed me. When I came back I was a nothing player for ages, like I wouldn't get any serious minutes in practice. That was hard". Participants who took responsibility for their own performance perceived it as a positive influence, as highlighted by Richard:

There's been times when the coach was negative if things were going badly, not saying I suck, more like he would say "what are you going to do about it?". He pins the responsibility on me because I was the main point guard and it's my responsibility to carry and lift the team. It actually helped a lot as I enjoy responsibility as it gives me a task and purpose. It's easier to have a goal I can envisage.

Positions of responsibility held by others in the practice environment were also suggested to be important for performance:

I looked up to the better and older players. People say I am really similar to one of the older guys. It was good to have the better players there as it helps me focus on where I was and where I need to be in the next two to three years. (Peter)

Discussion

This study aimed to explore the psychological influencing factors experienced by basketball players in the practice environment by evaluating the deeper meanings of participant experience using IPA. Nine

superordinate themes were constructed from the data. This study generated a large amount of data and this discussion focuses on the more novel and unique influencing factors in the practice environment. Namely, the negative experiences leading to positive performance outcomes, intra-team competition and goal orientations, and performance expectations. These factors, which have had limited previous research acknowledgment, suggest that the practice environment should be considered as a distinctive environment set apart from other fields of performance enquiry.

Negative Experiences Leading to Positive Performance Outcomes

The experience of positive emotional states during sport have been suggested to produce higher levels of performance compared to negative states (see McCarthy, 2011). For example, the premise that pleasant or positive emotional states are most effective for enhanced performance was proposed by Bortoli, Bertollo, Comani, and Robazza (2011) when they analysed competence, achievement goals, and motivational climate within youth participants. Also, a recent experimental study by De Muynck et al. (2017) reported greater enjoyment and autonomy from positive task feedback. However, results from the current study – gained from a repetitive practice environment rather than isolated competition situations – suggest initially perceived threats (i.e., negative performance influences) may have a future positive influence on performance.

In line with findings from the current study, Ruiz, Haapanen, Tolvanen, Robazza, and Duda (2017) evaluated the role of motivational climate in practice and found harmful pleasant states actually enhanced performance while helpful anxiety states did not. Compared to the raft of research that suggests, for example, threat is harmful for performance (see for review Hase, O'Brien, Moore, & Freeman, 2019) and negative stress factors contribute to negative performance outcomes in competition preparation (e.g., Fletcher, Hanton, Mellalieu, & Neil, 2012), it could be that some perceived negativity is functional within a practice domain. This has been highlighted in previous research where the effects of anger were related to a readiness to perform and generate energy in task execution (Ruiz & Hanin, 2011).

Specific to talent development environments, Savage, Collins, and Cruickshank (2016) identified the first experiences of developmental trauma was perceived at the age of approximately 16 years, which coincides with participants from the current study. Current study findings indicated that coach anger was perceived to negatively influence performance but in some cases it was treated as a warning sign that improvement was required leading to improved future performance. Although participants perceived negative coach behaviours, there was no indication of purposefully aggressive behaviour (Cruickshank & Collins, 2015). The indication of enhanced performance through perceived negative behaviour is a challenging research topic (Mountjoy et al., 2016) and requires further attention.

The complex relationship between initial negative influence creating future positive performance outcomes could be explained by Joseph, Murphy, and Regel's (2012) post-traumatic growth model that suggests resilience is built from trauma that promotes positive psychological growth. Hill, Cheesbrough, Gorczynski, and Matthews (2019) reported on choking incidents in sport causing a learning experience that positively influenced future performance. The lack of recognition in previous performance environment research to accept positive performance outcomes from initially perceived negative influences could be due to previous studies being focused on finite competitive moments (e.g., Thelwell, Weston, & Greenlees, 2007) rather than repetitive environments such as practice.

The conversion of negative experiences into positive performance influences could be due to environmental transactions that cause the successful engagement of coping strategies (see Lazarus, 1991). A large amount of research has been conducted on coping in sport (see Crocker, Tamminen, & Gaudreau, 2015) but a lack of specific attention has been paid to the practice environment. Massey, Meyer, and Naylor (2013) evaluated the use of self-regulation in a mixed martial arts (MMA) training camp and reported results suggesting MMA athletes will experience negative influences during practice periods and have a series of strategies to optimise performance. However, findings were particular sport specific (e.g., creating an ascetic routine and deliberately induced physical pain). The phenomenon of negative influence leading to positive performance outcomes may exclusively exist within the long-term repetitive nature of practice compared to competition, suggesting a need to separate research attention between the two environments.

Intra-team Competition and Goal Orientations

Motivational climate research in sport posits that task-involving climates aid in the development of personal competence and challenge strivings. Whereas ego-involving climates encourage normative competence that can be disempowering and maladaptive for motivation that enhances vulnerability to uncontrollable situations (Adie, Duda, & Ntoumanis, 2008; Smith et al., 2016). Current study findings suggest a collaboration existed between the use of both task-involving climates (e.g., practice sessions focused on player development) and ego-involving climates (e.g., intra-team competition causing normative competence evaluations) to positively influence performance. A motivational climate study by García-Calvo, Leo, Gonzalez-Ponce, Sánchez-Miguel, Mouratidis, and Ntoumanis (2014) identified peer- and coach-created task climates to be most effective for enhanced team performance. However, the authors reported unexplained variations between wave measurements and individual variables. Considering the study lasted an entire season with participant perceptions incorporating influence from the practice environment, it is conceivable that intra-team competition may have promoted an ego-climate element.

Intra-team competition was cited to be highly influential in the current study, which suggests elements of an ego-orientated climate existed. It could be that the investigated environments were lacking optimal climate conditions through high ego-orientated climates created by a strong individualistic goal focus. Buch, Nerstad, and Säfvenbom (2017) recently reported intrinsic motivation to be increased through low performance (ego) climate and high mastery (task) climate but this was not represented in the current study. The effects of regular scrimmaging (e.g., 5on5 practice match) within a basketball practice environment (Montgomery, Pyne, & Minahan, 2010) coupled with youth-athletes needing to maintain a social status within a group (Smith, 2003) appeared to promote a high ego-orientated climate that was perceived, at times, to be a positive influence on practice performance. The apparent beneficial effects of an ego-orientated climate may specifically effect this type of transitional youth practice environment.

Despite potential benefits from an ego-orientated practice climate, participants in the current study did cite clear negative influences from individuals that had independent outcome goals. A reason stated for this was the ability for individuals to separate their own performance against that of the team, causing participants to be preoccupied with the future, overly focused on personal performance statistics, and not feeling safe to fail in practice. Participants who understood that their success was dependent upon their teammates fared better in the way they communicated and supported others. However, the EABL platform, which can apply pressure on players to focus on personal development in relation to other players in their age group and is similar to youth football academies (Mills, Butt, Maynard, & Harwood, 2012), may hinder the ability to foster task- and team-orientated goals.

A further hindrance to the creation of a more task- and team-orientated practice environment was the setting of individual tangible outcome goals set against teammates for motivation (Smith, 2003). Players experienced negative emotions when losing in a competence-based activity against a teammate they perceived to be less skilled with the outcome effecting their perceived status in the team and pushing them into an individualistic focus. This study suggests that using intra-team competition for status purposes would benefit those who are successful but be damaging for those that fail to meet perceived status. Smith et al. (2016) identified coach-created motivational climates to be more ego-orientated in competition compared to practice, which suggests why a high level of competitive simulation activities in practice could promote ego-orientated perceptions.

An environment centred on normative comparisons through intra-team competition could produce an environment where players are fearful of taking risks (Gómez-López, Chicau Borrego, Marques da Silva, Granero-Gallegos, & González-Hernández, 2020). The coach is the architect of the practice environment and Brown and Arnold (2019) highlighted the coach-player connection to be integral to the creation of a fear-free environment that facilitates thriving. The current study reported the coach being a highly important facet of the practice environment through the application of clear goal focus and supportive behaviour. Strangely however, coach influence has been an underrepresented factor in performance environment literature apart from a handful of papers (i.e., Pain & Harwood, 2008; Pain et al., 2012).

Performance Expectations

The current study suggested a linear relationship existed between previous performance and current performance expectations (e.g., if previous performance was high then current practice performance would be high). Deeper examination highlighted the existence of negative influences when expected and actual performance were misaligned through participants basing expectations predominantly on previous performance and ignoring current physical or mental fatigue states. When actual performance was lower than the expected performance then crippling negative performance influences would occur, such as anger, frustration, and diminished coping abilities. Therefore, a performance expectation factor in practice appears to be independent from previous performance or the perceived ability to execute a task. This contradicts previous self-efficacy research by Beattie, Woodman, Fakehy, and Dempsey (2016) who suggested higher levels of previous performance feedback, such as the wealth of performance feedback gained from previous practice and competition experience, would enhance performance.

An explanation for disregarding current state when approaching practice was the overriding effect of social status within the group (Smith, 2003). Participants held a perceived ranking status within the group, which was gained from previous performance outcomes judged against teammates. The perceived ranking position was regularly discussed in relation to intra-team competition and current performance form, suggesting a strong interrelatedness of factors existed within the practice environment. The current study suggests that individuals who enter the practice environment require a far broader level of reflection based on their current physical and psychological state before setting performance expectations. This environmental factor appears practice-specific due to the tapering that would occur leading up to competition (Vachon, 2020).

Limitations and Future Research

Due to the interpretive nature of this study it is plausible that other interpretations of the data may exist (Alase, 2017). Data saturation was deemed to be gained at a relatively early phase of data analysis. However, further data collection could have taken place following deeper analysis once later stage theme creation was undertaken as suggested by Saunders et al. (2018). To further strengthen the credibility of data interpretation and to reengage with the philosophical underpinnings of the study, participants could have been approached with the

study analysis and results in addition to being provided with interview transcriptions (Smith & McGannon, 2017).

This study revealed the existence of factors evolving and changing their valence over time, which was especially evident with negative factors providing future positive performance influence (Lazarus, 2000). These adaptations were suggestive of coping strategy employment and future research could specifically focus on coping during practice. Beneficial performance outcomes from high beliefs and expectations was questioned in the current study. The detrimental influence of high expectations in the practice environment requires further exploration within other practice contexts to assess its existence.

Due to coaches having such an integral influence on the practice environment (Jones & Ronglan, 2018) future research could explore coach perceptions as they have been found to differ from other members of the environment (e.g., Pain & Harwood, 2008). Organisational stress (e.g., Arnold & Fletcher, 2012) and performance environment (e.g., Jones, Gittins, & Hardy, 2009) research has provided frameworks for the evaluation of environments and this should be the goal for future practice environment research. Finally, the presence of a strong ability ranking factor that was impacted by high levels of intra-team competition is an interesting future avenue for team sport research to navigate. The existence of personal goals is essential for the development of athlete ability and competitiveness (Mills et al., 2012) but there appears to be a cost to team performance that requires greater scrutiny.

Applied Implications

Several initially perceived negative influencing factors were cited as causing positive performance outcomes in the future. This indicates the need for coaches to pay close attention to the individual differences between players and subsequent performance outcomes following positive and negative situations. There was evidence to suggest that effort and motivation within the practice environment could be enhanced by negative influence resulting in positive performance effects due to effort being far more controllable than performance outcomes (e.g., Douglas & Carless, 2006; Smith et al., 2016). Positive communication in the practice environment appears to be most appropriate for successful performance. This is despite the findings from this study that suggest low effort states can be enhanced by negative communication, as the ethical implications of using negative communication with youth athletes needs to be considered.

Within the practice environments under investigation it appeared important that players were given the opportunity to achieve with teammates rather than individually. Goals and emotional states should also be aligned through a concerted team approach to goals to achieve greater team cohesion and performance (Pattison & McInerney, 2016), which could be gained with limiting the use of one versus one scenarios. Also, players should not be singled out for good or poor performance as this does not promote a team ethos. Due to the demanding repetitive nature of practice, a period of reflection before practice that is focused on current physical and mental state could avoid any overwhelming negative influences from not achieving preconceived performance expectations based on current form or perceived ability within the team. Therefore, fatigue should be a primary factor for the setting of all performance expectations before practice.

Conclusions

This study contributes to the recent work by Smith et al. (2019) to explore the psychological influencing factors of the practice environment by providing a richer and deeper evaluation of player experience. By undertaking an IPA approach the current study provides results focused on the unique experience of players within the practice environment. The current study proposes the existence of several factors previously underreported in the performance environment literature. These are: negative experiences leading to positive performance outcomes, intra-team competition and goal orientations, and performance expectations. The findings suggest the practice environment could be considered as a standalone investigatory field as differences between practice and competition environments were found. Using an approach designed to gather richer interpretations of participant experience, this study highlights the deficit in current performance environment research that has focused on nomothetic approaches to data collection. Current research promotes a somewhat linear relationship between environmental factors and performance (e.g., positive influences leading to positive performance and negative influences leading to negative performance). In reality, however, the interaction with one's environment is far more complex and future research is required to provide approaches that seek to delve deeper into this relationship. With a greater understanding of the performance influences emanating from the practice environment, practitioners will be better equipped to optimise the environment to enhance athlete development and competitive performance.

References

- Adie, J. W., Duda, J. L., & Ntoumanis, N. (2008). Achievement goals, competition appraisals, and the psychological and emotional welfare of sport participants. *Journal of Sport and Exercise Psychology*, 30(3), 302-322. doi: 10.1123/jsep.30.3.302
- Alase, A. (2017). The interpretative phenomenological analysis (IPA): A guide to a good qualitative research approach. *International Journal of Education and Literacy Studies*, 5(2), 9-19.

- Allen-Collinson, J. (2009). Sporting embodiment: sports studies and the (continuing) promise of phenomenology. *Qualitative Research in Sport and Exercise*, 1(3), 279-296. doi: 10.1080/19398440903192340
- Arnold, R., & Fletcher, D. (2012). A research synthesis and taxonomic classification of the organizational stressors encountered by sport performers. *Journal of Sport and Exercise Psychology*, 34(3), 397-429. doi: 10.1123/jsep.34.3.397
- Baker, J., Horton, S., Robertson-Wilson, J., & Wall, M. (2003). Nurturing sport expertise: factors influencing the development of elite athlete. *Journal of sports science & medicine*, 2(1), 1.
- Beattie, S., Woodman, T., Fakehy, M., & Dempsey, C. (2016). The role of performance feedback on the self-efficacy-performance relationship. *Sport, Exercise, and Performance Psychology*, 5(1), 1. doi: 10.1037/spy0000051
- Bortoli, L., Bertollo, M., Comani, S., & Robazza, C. (2011). Competence, achievement goals, motivational climate, and pleasant psychobiosocial states in youth sport. *Journal of Sports Sciences*, 29(2), 171-180. doi: 10.1080/02640414.2010.530675
- Brown, D. J., & Arnold, R. (2019). Sports performers' perspectives on facilitating thriving in professional rugby contexts. *Psychology of Sport and Exercise*, 40, 71-81. doi: 10.1016/j.psychsport.2018.09.008
- Buch, R., Nerstad, C. G., & Säfvenbom, R. (2017). The interactive roles of mastery climate and performance climate in predicting intrinsic motivation. *Scandinavian Journal of Medicine & Science in Sports*, 27(2), 245-253. doi: 10.1111/sms.12634
- Callary, B., Rathwell, S., & Young, B. W. (2015). Insights on the process of using interpretive phenomenological analysis in a sport coaching research project. *The Qualitative Report*, 20(2), 63-75.
- Crocker, P. R., Tamminen, K. A., & Gaudreau, P. (2015). Coping in sport. In S. D. Mellalieu, & S. Henton (Eds.), *Contemporary Advances in Sport Psychology: A review*, 28-67.
- Cushion, C., Ford, P. R., & Williams, A. M. (2012). Coach behaviours and practice structures in youth soccer: Implications for talent development. *Journal of Sports Sciences*, 30(15), 1631-1641. doi: 10.1080/02640414.2012.721930
- De Muynck, G. J., Vansteenkiste, M., Delrue, J., Aelterman, N., Haerens, L., & Soenens, B. (2017). The effects of feedback valence and style on need satisfaction, self-talk, and perseverance among tennis players: An experimental study. *Journal of Sport and Exercise Psychology*, 39(1), 67-80. doi: 10.1123/jsep.2015-0326
- Didymus, F. F. (2017). Olympic and international level sports coaches' experiences of stressors, appraisals, and coping. *Qualitative Research in Sport, Exercise and Health*, 9(2), 214-232. doi: 10.1080/2159676X.2016.1261364
- Douglas, K. & Carless, D. (2006). Performance environment research: Research report. London: UK Sport Performance Environment Research.
- Durand-Bush, N. & Salmela, J. H. (2002). The development and maintenance of expert athletic performance: Perceptions of world and Olympic champions. *Journal of Applied Sport Psychology*, 14(3), 154-171. doi: 10.1080/10413200290103473
- Eatough, V. & Smith, J. A. (2017). Interpretative Phenomenological Analysis. In C. Willig, & W. Stanley-Rogers (Eds.), *The SAGE Handbook of Qualitative Research in Psychology* (2nd ed., pp. 193-211). London: Sage.
- Fletcher, D., Hanton, S., Mellalieu, S. D., & Neil, R. (2012). A conceptual framework of organizational stressors in sport performers. *Scandinavian Journal of Medicine and Science in Sports*, 22(4), 545-557. doi: 10.1111/j.1600-0838.2010.01242.x
- Fletcher, D., & Streeter, A. (2016). A case study analysis of a high performance environment in elite swimming. *Journal of Change Management*, 16(2), 123-141. doi: 10.1080/14697017.2015.1128470
- García-Calvo, T., Leo, F. M., Gonzalez-Ponce, I., Sánchez-Miguel, P. A., Mouratidis, A., & Ntoumanis, N. (2014). Perceived coach-created and peer-created motivational climates and their associations with team cohesion and athlete satisfaction: Evidence from a longitudinal study. *Journal of Sports Sciences*, 32(18), 1738-1750. doi: 10.1080/02640414.2014.918641
- Gill, M. J. (2015). A phenomenology of feeling: Examining the experience of emotion in organizations. In C. E. Härtel, W. J. Zerbe, & N. M. Ashkanasy (Eds.), *New Ways of Studying Emotions in Organizations* (pp. 29-50). Emerald Group Publishing Limited. doi: 10.1108/S1746-979120150000011003
- Gómez-López, M., Chicau Borrego, C., Marques da Silva, C., Granero-Gallegos, A., & González-Hernández, J. (2020). Effects of Motivational Climate on Fear of Failure and Anxiety in Teen Handball Players. *International Journal of Environmental Research and Public Health*, 17(2), 592. doi: 10.3390/ijerph17020592
- Hardy, L., Roberts, R., Thomas, P. R., & Murphy, S. M. (2010). Test of Performance Strategies (TOPS): Instrument refinement using confirmatory factor analysis. *Psychology of Sport and Exercise*, 11(1), 27-35. doi: 10.1016/j.psychsport.2009.04.007

- Hase, A., O'Brien, J., Moore, L. J., & Freeman, P. (2019). The relationship between challenge and threat states and performance: A systematic review. *Sport, Exercise, and Performance Psychology*, 8(2), 123-144. doi: 10.1037/spy0000132
- Hill, D. M., Cheesbrough, M., Gorczynski, P., & Matthews, N. (2019). The consequences of choking in sport: a constructive or destructive experience?. *The Sport Psychologist*, 33(1), 12-22. doi: 10.1123/tsp.2018-0070
- Jones, G., Gittins, M., & Hardy, L. (2009). Creating an environment where high performance is inevitable and sustainable: The high performance environment model. *Annual Review of High Performance Coaching and Consulting*, 1, 139-149. doi: 10.1260/ijssc.4.suppl-2.671q532j757771rl
- Jones, R. L., & Ronglan, L. T. (2018). What do coaches orchestrate? Unravelling the 'quiddity' of practice. *Sport, Education and Society*, 23(9), 905-915. doi: 10.1080/13573322.2017.1282451
- Joseph, S., Murphy, D., & Regel, S. (2012). An affective-cognitive processing model of post-traumatic growth. *Clinical Psychology & Psychotherapy*, 19(4), 316-325. doi: 10.1002/cpp.1798
- Lazarus, R. S. (1991). Progress on a cognitive-motivational-relational theory of emotion. *American Psychologist*, 46(8), 819. doi: 10.1037/0003-066X.46.8.819
- Lazarus, R. S. (2000). How emotions influence performance in competitive sports. *The Sport Psychologist*, 14(3), 229-252. doi: 10.1123/tsp.14.3.229
- Macnamara, B. N., Moreau, D., & Hambrick, D. Z. (2016). The relationship between deliberate practice and performance in sports: A meta-analysis. *Perspectives on Psychological Science*, 11(3), 333-350. doi: 10.1177/1745691616635591
- Massey, W. V., Meyer, B. B., & Naylor, A. H. (2013). Toward a grounded theory of self-regulation in mixed martial arts. *Psychology of Sport and Exercise*, 14(1), 12-20. Doi: 10.1016/j.psychsport.2012.06.008
- McCarthy, P. J. (2011). Positive emotion in sport performance: current status and future directions. *International Review of Sport and Exercise Psychology*, 4(1), 50-69. doi: 10.1080/1750984X.2011.560955
- Mills, A., Butt, J., Maynard, I., & Harwood, C. (2012). Identifying factors perceived to influence the development of elite youth football academy players. *Journal of Sports Sciences*, 30(15), 1593-1604. doi: 10.1080/02640414.2012.710753
- Montgomery, P. G., Pyne, D. B., & Minahan, C. L. (2010). The physical and physiological demands of basketball training and competition. *International Journal of Sports Physiology and Performance*, 5(1), 75-86. doi: 10.1123/ijssp.5.1.75
- Mujika, I., Chatard, J. C., Busso, T., Geyssant, A., Barale, F., & Lacoste, L. (1995). Effects of training on performance in competitive swimming. *Canadian Journal of Applied Physiology*, 20(4), 395-406. doi: 10.1139/h95-031
- Nicholls, A. R. (2007). A longitudinal phenomenological analysis of coping effectiveness among Scottish international adolescent golfers. *European Journal of Sport Science*, 7(3), 169-178. doi: 10.1080/17461390701643034
- Noon, E. J. (2018). Interpretive phenomenological analysis: An appropriate methodology for educational research. *Journal of Perspectives in Applied Academic Practice*, 6(1), 75-83.
- Pain, M. A. & Harwood, C. (2007). The performance environment of the England youth soccer teams. *Journal of Sports Sciences*, 25(12), 1307-1324. doi: 10.1080/02640410601059622
- Pain, M. A. & Harwood, C. G. (2008). The performance environment of the England youth soccer teams: A quantitative investigation. *Journal of Sports Sciences*, 26(11), 1157-1169. doi: 10.1080/02640410802101835
- Pain, M. A., Harwood, C., & Mullen, R. (2012). Improving the performance environment of a soccer team during a competitive season: An exploratory action research study. *The Sport Psychologist*, 26(3), 390-411. doi: 10.1123/tsp.26.3.390
- Pattison, S., & McInerney, M. (2016). Sport Psychology and the Performance Environment. In J. Cremades & L. Tashman, *Global Practices and Training in Applied Sport, Exercise, and Performance Psychology: A Case Study Approach* (pp. 95-104). New York: Routledge.
- Picione, R. D. L. (2015). The idiographic approach in psychological research. The challenge of overcoming old distinctions without risking to homogenize. *Integrative Psychological and Behavioral Science*, 49(3), 360-370. doi: 10.1007/s12124-015-9307-5
- Pietkiewicz, I. & Smith, J. A. (2014). A practical guide to using interpretative phenomenological analysis in qualitative research psychology. *Psychological Journal*, 20(1), 7-14. doi:10.14691/CPPIJ.20.1.7
- Ruiz, M. C., Haapanen, S., Tolvanen, A., Robazza, C., & Duda, J. L. (2017). Predicting athletes' functional and dysfunctional emotions: The role of the motivational climate and motivation regulations. *Journal of Sports Sciences*, 35(16), 1598-1606. doi: 10.1080/02640414.2016.1225975
- Ruiz, M. C., & Hanin, Y. L. (2011). Perceived impact of anger on performance of skilled karate athletes. *Psychology of Sport and Exercise*, 12(3), 242-249. doi: 10.1016/j.psychsport.2011.01.005
- Smith, A. L. (2003). Peer relationships in physical activity contexts: A road less travelled in youth sport and exercise psychology research. *Psychology of Sport and Exercise*, 4(1), 25-39. doi: 10.1016/S1469-0292(02)00015-8

-
- Smith, S. M., Cotterill, S. T., & Brown, H. (2019). A case study of factors influencing performance in the practice environment. *Case Studies in Sport and Exercise Psychology*, 3(1), 33-40. doi: 10.1123/cssep.2019-0004
- Smith, J. A., Flowers, P., & Larkin, M. (2013). *Interpretative Phenomenological Analysis: Theory, Method and Research*. London: Sage.
- Smith, B. & McGannon, K. R. (2017). Developing rigor in qualitative research: Problems and opportunities within sport and exercise psychology. *International Review of Sport and Exercise Psychology*, 1-21. doi: 10.1080/1750984X.2017.1317357
- Smith, J. A. & Osborn, M. (2003). Interpretative phenomenological analysis. In J. A. Smith (Ed.), *Qualitative Psychology: A practical guide to research methods* (pp. 51-80). London: Sage
- Smith, N., Quested, E., Appleton, P. R., & Duda, J. L. (2016). Observing the coach-created motivational environment across training and competition in youth sport. *Journal of Sports Sciences*, 35(2), 149-158. doi: 10.1080/02640414.2016.1159714
- Sparkes, A. C. & Smith, B. (2009). Judging the quality of qualitative inquiry: Criteriology and relativism in action. *Psychology of Sport and Exercise*, 10(5), 491-497. doi: 10.1016/j.psychsport.2009.02.006
- Sparkes, A. C. & Smith, B. (2014). *Qualitative research methods in sport, exercise and health: From process to product*. Abingdon, UK: Taylor and Francis.
- Swann, C., Moran, A., & Piggott, D. (2015). Defining elite athletes: Issues in the study of expert performance in sport psychology. *Psychology of Sport and Exercise*, 16, 3-14. doi: 10.1016/j.psychsport.2014.07.004
- Thelwell, R. C., Weston, N. J., & Greenlees, I. A. (2007). Batting on a sticky wicket: Identifying sources of stress and associated coping strategies for professional cricket batsmen. *Psychology of Sport and Exercise*, 8(2), 219-232. doi: 10.1016/j.psychsport.2006.04.002
- Tracy, S. J. (2010). Qualitative quality: Eight “big-tent” criteria for excellent qualitative research. *Qualitative Inquiry*, 16(10), 837-851. doi: 10.1177/1077800410383121
- Vachon, A., Berryman, N., Mujika, I., Paquet, J. B., Arvisais, D., & Bosquet, L. (2020). Effects of tapering on neuromuscular and metabolic fitness in team sports: a systematic review and meta-analysis. *European Journal of Sport Science*, 1-12. doi: 10.1080/17461391.2020.1736183
- Wagstaff, C. R. (2019). Taking stock of organizational psychology in sport. *Journal of Applied Sport Psychology*, 31(1), 1-6, doi: 10.1080/10413200.2018.1539785